# DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

## LAKE TROPHIC DATA

## MORPHOMETRIC:

Lake: IVANHOE, LAKE

Town: WAKEFIELD

County: Carroll

River Basin: Coastal

Latitude: 43°36'05" N

Longitude: 70°59'25" W

Shore configuration: 1.08

Elevation (ft): 596

Areal water load (m/yr): 1.75

Shore length (m): 2700

Watershed area (ha): 160.6

P retention coeff.: 0.83

% watershed ponded: 0.0

Lake type: natural w/dam

BIOLOGICAL:	27 January 1993	2 July 1992
DOM. PHYTOPLANKTON (% TOTAL) #1	DINOBRYON 90%	DINOBRYON 98%
#2		
#3		·
PHYTOPLANKTON ABUNDANCE (cells/mL)		115
CHLOROPHYLL-A (µg/L)		1.47
DOM. ZOOPLANKTON (% TOTAL) #1	NAUPLIUS LARVA 63%	CALANOID COPEPODS 29%
#2	CALANOID COPEPODS 31%	KERATELLA 25%
#3		NAUPLIUS LARVA 22%
ROTIFERS/LITER	3	41
MICROCRUSTACEA/LITER	49	112
ZOOPLANKTON ABUNDANCE (#/L)	52	153
VASCULAR PLANT ABUNDANCE		Scattered
SECCHI DISK TRANSPARENCY (m)		6.0 Visible on bottom
BOTTOM DISSOLVED OXYGEN (mg/L)	12.9	9.3
BACTERIA (E. coli, #/100 ml) #1		
#2		
#3		

# SUMMER THERMAL STRATIFICATION:

#### not stratified

Depth of thermocline (m): None Hypolimnion volume  $(m^3)$ : None Anoxic volume  $(m^3)$ : None

CHEMICAL:			IVANHOE, WAKEFIELI		
	27 Janua	ary 1993	2 July 1992		
DEPTH (m)	1.5	3.5	2.0		5.0
pH (units)	6.3	6.3	6.7		6.7
A.N.C. (Alkalinity)	3.1	2.9	2.7		1.0
NITRATE NITROGEN	0.06	0.05	< 0.02		< 0.02
TOTAL KJELDAHL NITROGEN	0.17	0.26			
TOTAL PHOSPHORUS	0.005	0.005	0.006		0.008
CONDUCTIVITY (µmhos/cm)	50.9	50.8	46.9		47.0
APPARENT COLOR (cpu)	33	33	< 5		< 5
MAGNESIUM			0.31	,	
CALCIUM			1.3		
SODIUM			6.0	* · · · · · · · · · · · · · · · · · · ·	
POTASSIUM			< 0.40		
CHLORIDE	11	11	10	-	10
SULFATE	3	3	<sup>'</sup> 3		3
TN : TP	46	62			10.75
CALCITE SATURATION INDEX			4.1		

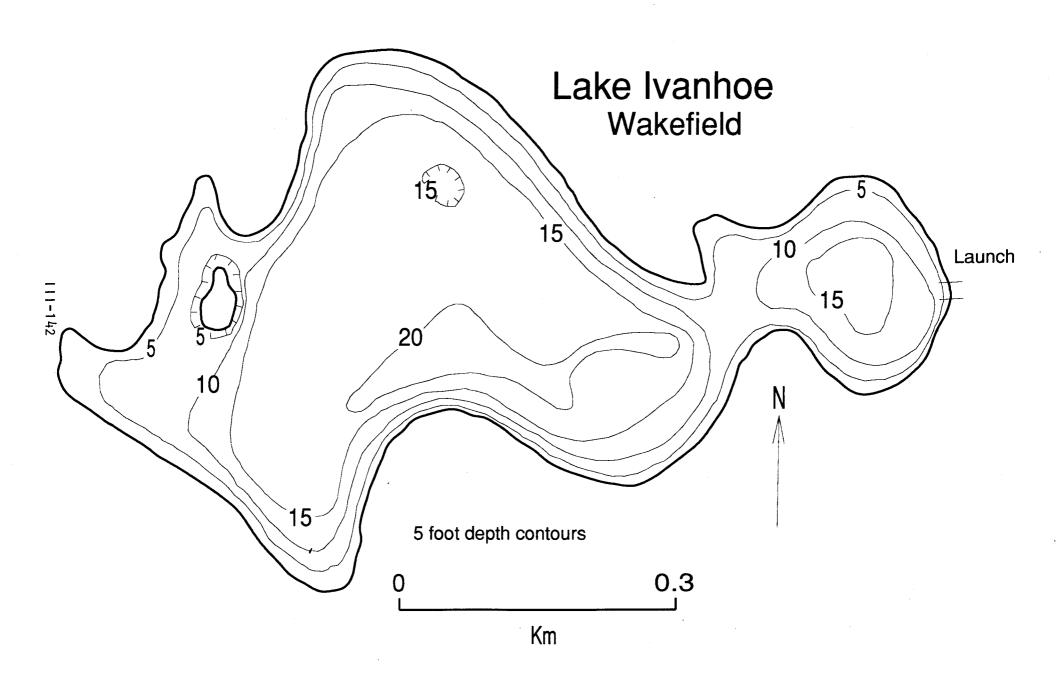
All results in mg/L unless indicated otherwise

# TROPHIC CLASSIFICATION: 1992

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	0	1	0	1	Oligo.

## **COMMENTS:**

- 1. Previously known as Little Round Pond.
- 2. Good launch site off Acton Ridge Road.
- 3. Two beaches were observed as well as an island loon sanctuary.
- 4. This lake was previously surveyed and classified in 1981. There was no change in trophic points or classification between the two years.
- 5. <u>Dinobryon</u> (35%) was the dominant wholewater phytoplankton. The dominant classes were the golden-browns (Chrysophyceae) (35%), greens (25%) and blue-greens (20%).



## FIELD DATA SHEET

LAKE: IVANHOE, LAKE

DATE: 07/02/92

TOWN: WAKEFIELD

WEATHER: CLEAR, WARM, BREEZY

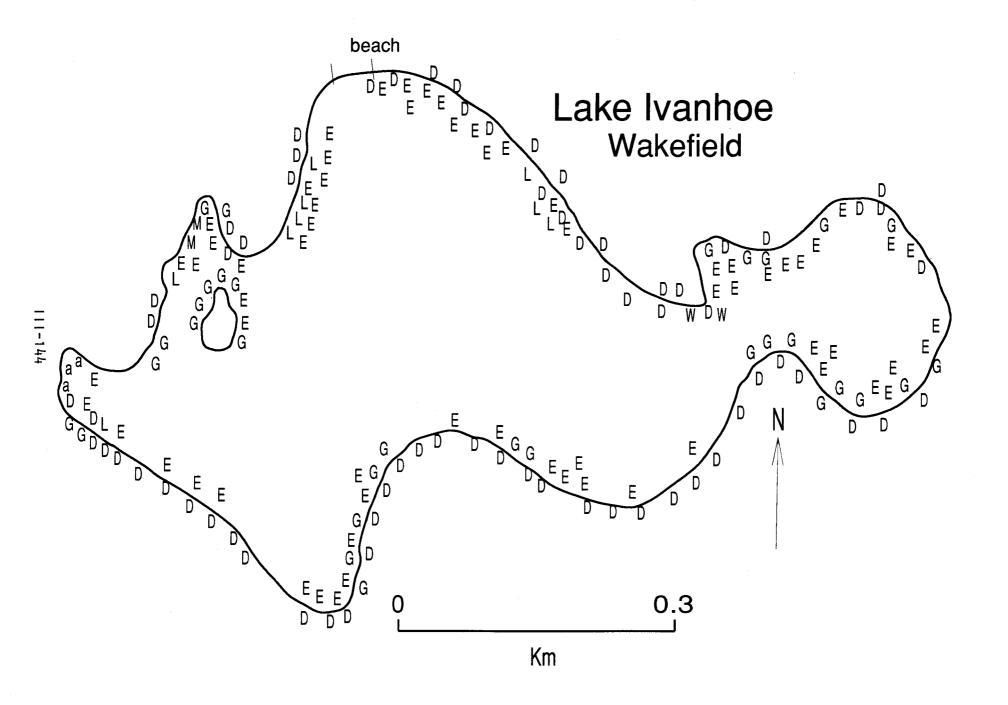
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EPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
0.1	23.0	9.1	106 %
1.0	23.0	9.2	107 %
2.0	23.0	9.2	107 %
3.0	23.0	9.1	106 %
 4.0	22.5	9.1	104 %
5.0	22.5	9.3	106 %
5.5	22.5	9.3	106 %
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SECCHI DISK (m): 6.0 VOB COMMENTS:

BOTTOM DEPTH (m): 6.0

TIME: 1230

\*Dissolved oxygen values are in mg/L



# AQUATIC PLANT SURVEY

LAK	E: IVANHOE, LAKE	TOWN: WAKEFIELD	DATE: 07/02/92			
Key PLANT NAME ABUNDANC						
кеу	GENERIC	COMMON	ABUNDANCE			
M	Myriophyllum humile	Water milfoil	Sparse			
E	Eriocaulon septangulare	Pipewort	Scattered			
G	Gramineae	Grass family	Sparse			
W	Potamogeton	Pondweed	Sparse			
L	Lobelia dortmanna	Water lobelia	Sparse			
а	Peltandra virginica	Arrow arum	Sparse			
D	Myrica gale	Sweet gale	Common			
		7,4 °C 20 °C				
****	192					
<u></u>						
-			;			
		OVERALL ABUNDANCE:	Scattered			

# **GENERAL OBSERVATIONS:**

- 1. Pipewort was primarily the vegetative bottom rosettes without the flowering stalk.
- 2. Sweet gale was primarily terrestial on the banks.
- 3. Plant came up on anchor; there may be bottom growth not depicted on the map.